

What is claimed is:

1. A system of capturing and processing a digital image with distance information, comprising means for receiving reflective and deflective light beams from an object, means for sensing the received light beams to generate digital images with distance information, means for storing the digital images, and a central processing unit for analyzing and processing the digital image of distance information by using the distance information as a depth channel.
- 10 2. The system of claim 1, wherein the means for receiving the light beams includes at least a lens and a CCD array unit, and the lens is attached to a housing of the system.
- 15 3. The system of claim 2, wherein the storage means and the CPU are mounted within the housing.
4. The system of claim 2, further comprising a grid beam light unit being provided as an internal unit inside the housing.
- 20 5. The system of claim 2, further comprising a grid beam light unit being provided as an external unit.
6. A method of capturing and processing a digital image with distance information, comprising the steps of receiving reflective and deflective light beams from an object, detecting the light beams to generate digital images with distance information, converting the distance information into depth channel, storing the digital image with said depth information for future processing, and analyzing and processing the digital image with the desired depth channel.
- 25 30 7. The method of claim 6, wherein said step of processing includes adjusting said depth channel at a desired pixel of said digital image.

8. The method of claim 6, further comprising a step of transmitting grid light beams toward the object, including horizontal and vertical beam light to generate a digital image of a group of pixels carrying depth information.

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9. The method of claim 8, wherein the step of analyzing the distance information comprises the analysis of received grid light beams so as to determine depth information of the digital image.

10 10. The method of claim 6, further comprising storing said depth channel as a group of information independent from other light channels of red, green, and blue.

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